

## CLAIMS

### WHAT IS CLAIMED IS:

1. An indoor air-quality system comprising:

At least one ultraviolet light source; and

A switch turning the at least one ultraviolet light source on and off, the switch turning the at least one ultraviolet light source on based upon whether at least one HVAC component is on and the switch turning the at least one ultraviolet light source off based upon whether the at least one HVAC component is off.

2. The system of claim 1 wherein the HVAC component is a fan and wherein the switch turns off the at least one ultraviolet light source based upon the fan being off, and wherein the switch turns on the at least one ultraviolet light source based upon the fan being on.

3. The system of claim 1 wherein the HVAC component is an evaporator coil and wherein the switch turns off the at least one ultraviolet light source based upon the evaporator coil being off, and wherein the switch turns on the at least one ultraviolet light source based upon the evaporator coil being on.

4. The system of claim 3 wherein the at least one ultraviolet light source includes a first ultraviolet light source and wherein the system further includes a second ultraviolet light source, and wherein the switch turns off the first ultraviolet light source based upon the evaporator coil being off, wherein the switch turns on the first ultraviolet light source based upon the evaporator coil being on, and wherein the second ultraviolet light source is on at least sometimes while the evaporator coil is off.

5. The system of claim 4 wherein the second ultraviolet light source is switched on based upon the evaporator coil being on.

6. The system of claim 5 wherein the at least one ultraviolet light source is part of an ultraviolet photocatalytic oxidation device.

7. The system of claim 1 wherein the at least one ultraviolet light source is part of an ultraviolet photocatalytic oxidation device.

8. A method for controlling an ultraviolet light source in an air-quality system including the steps of:

a) switching an ultraviolet light source based upon whether at least one HVAC component is on; and

b) switching the ultraviolet light source off based upon whether the at least one HVAC component is off.

9. The method of claim 8 wherein the HVAC component is a fan and wherein said step a) further includes the step of turning on the ultraviolet light source based upon the fan being on, and wherein said step b) further includes the step of turning off the ultraviolet light source based upon the fan being off.

10. The method of claim 8 wherein the HVAC component is an evaporator coil and wherein said step a) further includes the step of turning on the ultraviolet light source based upon the evaporator coil being on, and wherein said step b) further includes the step of turning off the ultraviolet light source based upon the evaporator coil being off.

11. The method of claim 10 wherein the ultraviolet light source is a first ultraviolet light source, the method further including the step of powering a second ultraviolet light source while the evaporator coil is off.

12. The method of claim 11 further including the step of powering the second ultraviolet light while the evaporator coil is on and while the first ultraviolet light source is on.